

# **CORROSION SCIENCE**

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## AIMS & SCOPE

*Corrosion Science* publishes original papers and critical reviews in the fields of pure and applied corrosion, the degradation of materials, both metallic and non-metallic, and surface science and engineering as relating to degradative processes and phenomena. Papers may range from the highly theoretical to the essentially practical, covering such areas as high temperature oxidation, passivity, anodic oxidation, biochemical corrosion, stress corrosion cracking, and mechanisms and methods of corrosion control.

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T. Y. RIZK, G. E. THOMPSON and J. L. DAWSON	1801	Mass transfer enhancement associated with sudden flow expansion
J. RUIZ and M. ELICES	1815	Environmental fatigue in a 7000 series aluminium alloy
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P. LI, T. C. TAN and J. Y. LEE	1935	Impedance spectra of the anodic dissolution of mild steel in sulfuric acid
A. E. HUGHES, J. D. GORMAN and P. J. K. PATERSON	1957	The characterisation of Ce-Mo-based conversion coatings on Al-alloys: Part I
J. D. GORMAN, S. T. JOHNSON, P. N. JOHNSTON, P. J. K. PATERSON and A. E. HUGHES	1977	The characterisation of Ce-Mo-based conversion coatings on Al-alloys: Part II
S. AHILA, B. REYNDERS and H. J. GRABKE	1991	The evaluation of the repassivation tendency of Cr-Mn and Cr-Ni steels using scratch technique
G. ROCCHINI	2007	The evaluation of corrosion rate through an inversion method
F. ZUCCHI, G. TRABANELLI and M. FONSATI	2019	Tetrazole derivatives as corrosion inhibitors for copper in chloride solutions
D. B. LEE, H. MITSUI, H. HABAZAKI, A. KAWASHIMA and K. HASHIMOTO	2031	The high temperature sulfidation behavior of Nb-Al-Si coatings sputter-deposited on a stainless steel
N. CANSEVER, A. F. ÇAKIR and M. ÜRGEN	2043	New accelerated test for studying the susceptibility of stainless steels to chloride stress corrosion cracking under salt crust
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T. HANAWA, K. ASAMI and K. ASAOKA	2061	AES studies on the dissolution of surface oxide from calcium-ion-implanted titanium in nitric acid and buffer solutions
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C. CAQ	2071	U.R. Evans Award
	2073	On electrochemical techniques for interface inhibitor researches
E. LEVLIN	2083	Aeration cell corrosion of carbon steel in soil: <i>in situ</i> monitoring cell current and potential
M. G. S. FERREIRA, R. LI and R. VILAR	2091	Avoiding crevice corrosion by laser surface treatment
G. ROCCHINI	2095	The influence of potential sweep rate on the computation of the polarization resistance
K. SASAKI and G. T. BURSTEIN	2111	The generation of surface roughness during slurry erosion-corrosion and its effect on the pitting potential

B. BEVERSKOG and I. PUIGDOMENECH	2121	Revised Pourbaix diagrams for iron at 25–300°C
M.-W. TAN, E. AKIYAMA,	2137	The role of chromium and molybdenum in passivation of
H. HABAZAKI, A. KAWASHIMA,		amorphous Fe–Cr–Mo–P–C alloys in de-aerated 1 M HCl
K. ASAMI and K. HASHIMOTO		
T. E. GRAEDEL	2153	GILDES model studies of aqueous chemistry. I. Formulation
		and potential applications of the multi-regime model
L. A. FARROW, T. E. GRAEDEL and	2181	GILDES model studies of aqueous chemistry. II. The corro-
C. LEYGRAF		sion of zinc in gaseous exposure chambers
J. TIDBLAD and T. E. GRAEDEL	2201	GILDES model studies of aqueous chemistry. III. Initial SO <sub>2</sub> -
		induced atmospheric corrosion of copper
J. E. SVENSSON and L. G. JOHANSSON	2225	The temperature-dependence of the SO <sub>2</sub> -induced atmospheric
		corrosion of zinc; a laboratory study
F. NOLI, P. MISAEILIDES, H. BAUMANN	2235	The preparation, characterisation and corrosion behaviour of
and A. HATZIDIMITRIOU		ion-implanted and ceramic-coated AISI 321 steel samples
H. KONNO, K. UTAKA and R. FURUICHI	2247	A two step anodizing process of aluminium as a means for
		improving the chemical and physical properties of oxide films
G. T. BURSTEIN, G. O. ILEVARE	2257	The effect of specimen size on the measured pitting potential of
		stainless steel
	2267	Erratum: The effect of phase compositions on the pitting
		corrosion of 25 Cr duplex stainless steels in chloride solutions.
		L. F. GARFIAS-MESIAS, J. M. SYKES and C. D. S. TUCK
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